

11. **Restaurant Loan** The Sweet Tooth Restaurant borrowed \$3000 on a note dated May 15 with simple interest of 11%. The maturity date of the loan is September 1. The restaurant made partial payments of \$875 on June 15 and \$940 on August 1. Find the amount due on the maturity date of the loan.

Time May 15 to June 15 = 31 days

$$I = 3000(.11)\left(\frac{31}{360}\right) = 28.42$$

$$\text{Pay} = 875 - 28.42 = 846.58$$

$$\text{New P} = 3000 - 846.58 = 2153.42$$

Time June 15 → Aug 1 = 47 days

$$I = 2153.42(.11)\left(\frac{47}{360}\right) = 30.93$$

$$\text{Pay} = 940 - 30.93 = 909.07$$

$$\text{New P} = 2153.42 - 909.07 = 1244.35$$

Time Aug 1 → Sept 1 = 31 days

$$I = 1244.35(.11)\left(\frac{31}{360}\right) = 11.79$$

$$\text{Final} = 1244.35 + 11.79 = 1256.14$$